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New Species of Fungi from various Localities with Notes on some published Species

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Echinodontium E. & E. nov. gen. (Family *Hydnaceae*).

Differs from *Hydnum* in the thick, woody pileus of *Fomes* and the teeth beset with spines, as in *Mucronoporus* and *Hymenochaete*.

E. tinctorium E. & E.

Fomes tinctorius E. & E. Bull. Torr. Club, **22**: 362. 1895

Hydnum tinctorium Lloyd in literis. On *Abies grandis*, Jonesville, Idaho (Prof. C. V. Piper, comm. C. G. Lloyd).

In the specimen from which *Fomes tinctorius* was described the teeth were all broken off so as to resemble a *Polyporus*: but what were taken for pores were only the hollow bases of the brittle, cinereous teeth which, in the Idaho specimens are about 1 cm. long and 1.5–2 mm thick at the base. The hymenial surface is rather sparingly clothed with subconical, reddish-brown spines, 20–30× 6–7 μ. The spores at first are nearly hyaline.

The characters of this fungus differ so much from *Hydnum* that we propose it here as a new genus.

Corticium macrosporum E. & E.

On dead limbs of *Fraxinus?* Ohio (Lloyd, no. 3113).

Dull white, appressed, thin, appearing at first in orbicular patches 3–5 mm. in diameter, the narrow, white, cottony margin sometimes narrowly involute, at length confluent: spores ovate-elliptical, 10–14 × 7–8 μ, abundant.

[Issued 17, February.]

The hymenium is of a somewhat waxy nature, smooth, but uneven, showing the inequalities of the bark.

Hymenochaete asperata E. & E.

On pine bark, Abita, East Louisiana, Jan. 1898 (Langlois, no. 2647).

Effused, adnate, dull yellow, becoming a little darker in the center, thin, margin irregular, spreading over the bark in irregular shaped patches, 2–6 or more cm. in extent: setae stout, 60–70 × 7–8 μ, tubercular-roughened above and often prolonged at the tip into a hyaline, lance-shaped slender point 20–30 μ long, but often the tips of the setae are rounded and obtuse but still hyaline: spores small, subglobose, 3 μ.

Seems different from *H. scabriseta* Cke.

Zygodesmus pubidus E. & E.

Forming a thin, loosely compacted, light yellow, membranaceous, subpuberulent coating on rotten wood. Newfoundland (Rev. A. C. Waghorne, no. 1026).

Hyphae branching at right angles, subhyaline, sparingly septate, with an occasional zygodesmoid joint: conidia short-elliptical, hyaline, smooth, 4 × 3 μ, with a single large mostly eccentric nucleus.

Mucronoporus sublilacinus E. & E.

On pine logs, Abita Springs, East Louisiana (Langlois, no. 2529).

Pileus semiorbicular, firm, flat, 6–7 cm. long, 9–10 cm. broad, repeatedly zonate with elevated ridges and shallow furrows; surface at first clothed with a cinereous-gray cuticle which finally disappears: margin spreading, subacute, pores round, 0.5–1 cm. long, mouths slightly uneven, obtuse, 200 μ in diameter (not including dissepiments), lilac color on the surface, cinnamon color within; flesh bright cinnamon-yellow, zonate within, about 0.5 cm. thick in the middle, thinning out towards the margin; spines stout, cylindric-conical, projecting part 15–20 × 4 μ.

The lilac colored, larger pores and thicker substance distinguish this from *M. licnoides* Mont.

Dacryomyces cenangioides E. & E.

On dead birch limbs, Nuttallburg, W. Va., Dec. 1897 (L. W. Nuttall, no. 922).

Erumpent, mostly cespitose and connate, forming tufts 0.5–1 cm. in diameter, obconic, discoid, concave above at first but when mature convex above, variously wrinkled, folded and immarginate, liver-color with a lilac tint when fresh, drab-color when dry and quite fragile, texture of coarse inflated hyphae resembling, when the dry plant is broken open, a mass of dirty light-yellowish tomentum: basidia clavate-cylindrical, 40–50 × 6–7 μ with two short, obtuse sterigmata: spores shaped like apple seeds, 12–20 (mostly 15) × 6–8 μ, filled with minute nuclei, becoming 3 or more septate, hyaline.

When dry, bears a striking resemblance to a cespitose *Cenangium*. *Tremella sarcoides* (Dicks.) is found with this.

Asterina Mexicana E. & E.

On *Agave Mexicana*, City of Mexico, May, 1898 (Dr. B. F. G. Egeling).

Perithecia amphigenous, subastomous, small (110–150 μ), rough, black, fringed around the base with coarse, brown, subincurved hairs, seated on appressed, reticulately branched, black mycelium of the *Meliola* type: asci obovate, abruptly short-stipitate, 40–60 × 20–30 μ, or becoming subglobose, 8-spored: sporidia crowded, clavate-cylindrical, uniseptate and constricted near the upper end, upper cell globose, and easily separable, lower cell oblong, 22–27 × 8–10 μ, filled with granular matter, nearly hyaline, becoming brown.

The perithecia are crowded in orbicular patches about 1 cm. diam., often with a white spot in the center.

Melanomma gregarium E. & E.

On decorticated cottonwood limbs, Rooks Co., Kansas, Jan. 1899 (Bartholomew, no. 2532).

Perithecia gregarious, globose-conical, slate color and minutely roughened, 250–350 μ in diameter, base slightly sunk in the wood, finally collapsing above: ostiolum papilliform, black and shining: asci clavate-cylindrical, p. sp. 50–70 × 10–12 μ with abundant, filiform paraphyses: sporidia subbiseriate, oblong or ovate-elliptical, 3-septate and finally slightly constricted at the septa, 12–15 × 5–7 μ.

Differs from *M. rhypodes* E. & E. in its broader, shorter sporidia and collapsing perithecia.

Amphisphaeria aspera E. & E.

On *Tetradymia*, Montrose, Colorado (Bethel, no. 517).

Perithecia gregarious or cespitose, the lower half sunk in the bark, 400–600 μ in diameter, depressed-globose, densely roughened with projecting points, ostiolum papilliform or short-cylindrical: asci clavate-cylindrical, short-stipitate, 80–90 × 75 μ, obscurely paraphysate: sporidia uniseriate, oblong, subinequilateral, uniseptate, not constricted, 20–30 × 8–10 μ, clear brown.

Teichospora brachyasca E. & E.

On decorticated limbs of *Quercus Watsoni*, Rooks Co., Kansas, May, 1899 (Bartholomew, no. 2599).

Perithecia scattered, superficial, depressed-globose, 0.25–0.35 mm. in diameter, ostiolum obscure, papilliform or wanting: asci obovate-oblong, sessile or nearly so, 35–45 × 16–20 μ, sporidia irregularly crowded, obovate, 3-septate, slightly constricted, more distinctly so at the middle septum, one or two cells divided by a longitudinal septum, 14–18 × 6–7 μ.

Schizostoma Nevadensis E. & E.

On decorticated *Ephedra Nevadensis*, Mesa Verde, Colorado, July, 1899 (Bethel, no. 518).

Perithecia gregarious, globose or subelliptical, sunk in the matrix with the upper part projecting, about .5 mm. in diameter, ostiolum narrow, not very conspicuous: asci cylindrical, 75–80 × 7–10 μ, with abundant paraphyses: sporidia overlapping-uniseriate or biseriate, oblong-fusoid, uniseptate, scarcely constricted, 15 × 4–5 μ, pale-brown.

Mycosphaerella lithospermi E. & E.

On dead stems of *Lithospermum officinale*, Gillivray, Ontario, Canada, June, 1898 (Dearness, no. 2862).

Perithecia scattered, pustuliform-prominent, but subcuticular, 170–200 μ in diameter, flattened or sub-collapsed above: asci oblong cylindrical, short-stipitate, 70–80 × 12–15 μ: sporidia biseriate, ovate-elliptical, hyaline, uniseptate and constricted, 12–16 × 6–8 μ.

Leptosphaeria fraserae E. & E.

On dead stems of *Frasera speciosa*, Rico, Colorado, July, 1899 (Bethel, no. 502).

Perithecia scattered, subcuticular, but by the falling away of the cuticle, superficial, globose, becoming depressed, 0.25 mm. in diam.,

ostiolum conic-papilliform, distinct: asci cylindrical or clavate-cylindrical, stipitate, paraphysate, 80–110 × 8–10 μ: sporidia uniseriate, oblong-elliptical, yellow-brown, 3-septate, becoming lightly constricted, especially at the middle septum, 14–16 × 7–8 μ.

The sporidia are much like those of *L. fuscella* B. & Br., but in that species the perithecia are buried and have no ostiolum.

Thyridium vitis E. & E.

On dead shoots of *Vitis riparia*, Rooks Co., Kansas (Bartholomew).

Perithecia gregarious, often 2–3 subconfluent, entirely buried in the bark which is raised into low, flattish pustules over them, 250–300 μ in diameter, grayish inside, thin-walled, globose: ostiolum inconspicuous, barely penetrating the bark: asci clavate-cylindrical, short-stipitate, 100–115 × 15–18 μ, with abundant paraphyses: sporidia obliquely uniseriate, or subbiseriate above, obovate-oblong, brown, 5–7-septate, constricted in the middle, obtusely rounded at the ends, 18–22 × 10–12 μ, with a longitudinal septum running through one or more cells.

Differs from *T. antiquum* E. & E. in its larger asci and larger, differently shaped 5–7-septate sporidia.

Hysterographium graminis E. & E.

On dead culm of *Panicum virgatum* and *Andropogon provincialis*, Rooks Co., Kansas, March, 1899 (Bartholomew, no. 2556).

Erumpent-superficial, 0.5–1 mm. long, 150–200 μ broad, rounded at the ends, with a slight longitudinal furrow along the center: asci clavate-oblong, short-stipitate, paraphysate, p. sp. 60–75 × 15–20 μ: sporidia biseriate, oblong-elliptical, yellow, becoming brown, 3-septate, compressed, scarcely or only slightly constricted at the septa, 16–20 × 7–10 μ, 5–6 μ thick, with a longitudinal septum on the flattened side running through all the cells, viewed edgewise only the transverse septa are visible.

The sporidia resemble very much those of some species of *Pleospora*, as *P. aurea*, *P. compressa*, *P. permunda*, etc.

Hypoderma equiseti E. & E.

On dead stems of *Equisetum hyemale*, Rooks Co., Kansas, Jan., 1899 (Bartholomew, no. 2535).

Perithecia oblong or linear, 1–3 mm. long, covered by the thin epidermis which is split along the middle: asci oblong-clavate,

35–45 × 10–12 μ, short-stipitate, paraphysate? sporidia biseriate, oblong, obtuse, uniseptate, constricted, 13–15 × 4–5 μ, hyaline.

Phyllosticta canescens E. & E.

On leaves of *Ribes divaricatum*, Bear Creek, near Volmer, Idaho, Oct., 1898 (Prof. L. F. Henderson, no. 4707).

Spots large, irregularly occupying and killing half of the leaf, or lobe of a leaf, rusty brown whitening out and becoming minutely furfuraceous above, the surrounding parts of the leaf becoming yellowish: perithecia epiphyllous, prominent, small, 80–100 μ, black: sporules oblong- or ovate-elliptical, mostly with a nucleus in each end, 5–8 × 2.5–3.5 μ.

PHYLLOSTICTA GALACTIS Cke. Grev. 14: 90. 1886. Exsicc. E. & E., N. A. F. 3153

On leaves of *Galax aphylla*, West Va. (Nuttall).

Spots irregular, pale brown or cinereous, without any distinct margin: perithecia gregarious in dense patches, very minute (80 μ), immersed at the base, punctiform, black, shining: sporules cylindrical, rounded at the ends, 2–4-nucleate, hyaline, 12–15 × 4 μ.

The specimens in N. A. F. are poor and do not well represent this species.

Phyllosticta zonata E. & E.

On living leaves of *Pirus Ioensis*, Ames, Iowa, August, 1899 (H. Harold Hume).

Spots irregular, reddish-brown, 2–10 mm. in diam. or confluent over the greater part of the leaf: zonate, definite, with margin very slightly raised and a little darker: perithecia punctiform, minute, innate, covered by the thin, whitish epidermis, epiphyllous: sporules oblong-elliptical, 3.5–4 × 1.5 μ.

Differs from *P. Briardi* Sacc. and *P. limitata* Pk. in its smaller sporules and zonate spots.

Phoma erysiphoides E. & E.

On *Gnaphalium?* and *Achillea Millefolium*, Morrison, Colorado, May, 1899 (Bethel, no. 472).

Perithecia minute, thickly and evenly scattered on the stems, erumpent-superficial, subglobose, membranaceous, subastomous, of coarse cellular structure: sporules short-elliptical, hyaline, 8–12 × 6–7 μ.

Rhabdospora pachyspora E. & E.

On dead stems of *Erigeron ?* Morrison, Colorado, May, 1899 (Bethel, no. 473).

Perithecia scattered, minute, conic-globose, semierumpent: sporules arcuate, 3–4-nucleate, hyaline, subobtuse, 16–25 × 3.5–4 μ.

Dothiorella rhoina E. & E.

On dead limbs of *Rhus Toxicodendron*, Morrison, Colorado, May, 1899 (Bethel, no. 475 partly).

Perithecia bursting through the epidermis, 4–6 together stromatically connected or scattered singly, raising and finally piercing the epidermis or sometimes on the gregariously crowded and slightly connected at base, .35–.5 mm. in diameter, hemispheric-globose, with a papilliform ostiolum: sporules elliptical or ovate-elliptical, subolivaceous, 4–7 × 3–4 μ.

Exosporium pallidum E. & E. occurs on the same limbs.

Sphaeropsis hederae E. & E.

On dead stems of *Hedera Helix*, Nuttallburg, West Va., July, 1899 (L. W. Nuttall, no. 961).

Perithecia suberumpent, thickly scattered, rather flattened above, about 0.25 mm. in diameter with an obscurely papilliform or short conical ostiolum: sporules oblong-elliptical, 20–25 × 8–10 μ.

Sphaeropsis helicis Cke. & Mass. is said to have a long exserted ostiolum and spores 12 × 8 μ.

Sphaeropsis dircae E. & E.

On dead stems of *Dirca palustris*, near Ottawa, Canada, April, 1899 (Macoun, no. 705).

Perithecia gregarious, minute, raising the epidermis into little pustules perforated at the summit by the minute ostiolum: sporules oblong-elliptical, 15–18 × 7–8 μ.

Diplodia hypoxyloides E. & E.

On dead twigs of *Menispermum Canadense*, Emma, Mo., Nov. 1899 (Rev. C. H. Demetrie, no. 720).

Perithecia erumpent, surrounded by the ruptured epidermis, depressed-hemispherical, convex above, about 1 mm. diameter whitish in the center at first, soon slaty-black, white inside and soon hollow, of carbonaceo-coriaceous texture, resembling the perithecia of

Hypoxylon: sporules oblong brown, becoming uniseptate; 12–16 × 4–5.5 μ on slender basidia about 20 × 2 μ.

Varies from the usual type of *Diplodia*.

Ascochyta mali E. & E.

On living limbs of *Pirus Malus*, at the Agricultural College, Mich., May, 1899 (C. F. Wheeler).

Spots circular, 0.5–1 cm. in diameter concave, of a pale brick-red color, with the margin narrowly free, sometimes becoming much larger, extending for 2 cm. and nearly surrounding the limb. These spots appear to be formed from the altered substance of the bark which is changed in color and cracks away around the margin from the surrounding bark which remains in its normal condidition: perithecia at first solitary, a single one erumpent in the center of the circular disk, finally 2–4 or more scattered on the same disk: sporules oblong or oblong-elliptical, smoky-hyaline, uniseptate, 6–8 × 2.5–3.5 μ. On the same spots also occurs a *Phoma* (*P. ambigua* Sacc.)? with sporules much resembling those of the *Ascochyta* only without any septum, and a *Phlyctaena* (*P. Mali* E. & E.) with filiform sporules curved near one end, 20–27 × 1.25–1.5 μ in numerous smaller perithecia scattered on the spots. The fungus soon kills the limbs.

Stagonospora desmodii E. & E.

On dead stems of *Desmodium tortuosum*, Lake City, Fla., Oct. 1899 (H. H. Hume).

Perithecia scattered or gregarious on reddish-brown discolored, indefinite spots which become darker, subcuticular, 150–200 μ in diameter, slightly raising the cuticle which is blackened over them: sporules oblong, hyaline, 3–4-guttulate, 8–12 × 4–5 μ.

On the same stems, on elongated black spots with a white center is a *Cercospora* with long, brown, septate hyphae cespitose on a sphaeroid base and slender, hyaline, multinucleate conidia 80–100 × 3–4 μ, becoming multiseptate (*Cercospora melaleuca* E. & E.).

Camarosporium hederae E. & E.

On dead shoots of *Hedera Helix*, Nuttallburg, W. Va., July, 1899 (L. W. Nuttall, no. 958).

Perithecia erumpent-superficial, ovate, attenuated above into a short-conical or short-cylindrical ostiolum, about 200 μ in diameter, thickly scattered or even densely crowded: sporules globose or

ovate, 1–3-septate, olive-brown, 7–10 × 5–7 μ, occasionally with a longitudinal septum across one or more of the cells.

C. sarmentitium Sacc., on the same host, has spores twice as large but does not differ otherwise. Possibly the W. Va. specimen should be considered as a small-spored form of this.

Septoria philadelphi E. & E.

On leaves of *Philadelphus Lewisii*, near Juliaetta, Idaho, Oct., 1898 (Prof. L. F. Henderson, no. 4702).

Spots amphigenous, irregular in shape, partly limited by the veinlets, 2–10 mm. in diameter, more or less confluent, dirty brown, becoming more or less silvery white: perithecia amphigenous, scattered on the spots, 100–120 μ in diam.: sporules fusoid, mostly curved, 3–6-septate, narrower at one end, 20–40 (exceptionally 60) × 4–5 μ.

Septoria fulvescens Ell. & Halsted.

On faded leaves of *Acer saccharinum*.

The fungus occurs on leaves already faded to light-yellow by the autumnal frosts. On these leaves, mostly along the main nerves are indistinct blotches of a deeper yellow, 1–1.5 cm. broad and indefinitely limited perithecia hypophyllous on these spots 70–80 μ in diameter, slightly flattened or depressed, numerous: sporules oblong-cylindrical, slightly curved, continuous, hyaline, 7–12 × 1.5–2 μ, mostly not over 10 μ long.

Septoria Salliae Ger. and *S. acerinum* West, have longer and different spots.

Septoria flagellifera E. & E.

On leaves of *Pisum sativum*, Brookings, So. Dakota, July, 1898 (L. W. Carter), comm. Dr. N. L. Britton.

Amphigenous, spots suborbicular, 0.25–1 cm., diameter, subzonate, with a slightly raised border, rusty-brown at first, whitening out in the center: perithecia hemispheric—prominent or subconical, dark amber color, 75–120 μ in diameter, sporules filiform, hyaline, nucleolate, only slightly curved, 80–120 × 2–2.5 μ.

Differs from *S. pisi* West, in the different character of the spots and the much longer sporules.

Kellermannia alpina E. & E.

On dead stems of *Aquilegia coerulea* and other dead herbaceous

stems. Red Mountain, Colorado, June, 1899, alt. 12,000 ft. (Bethel, no. 490 in part).

Perithecia erumpent-superficial, black, depressed-globose, about .35 mm. in diameter, with a papilliform ostiolum, membranaceous, cellular, the cells around the ostiolum arranged in radiating lines: sporules fusoid, 4–6-nucleate, hyaline, prolonged above into a slender, slightly curved awn, including which the length is 30–35 μ, width 2.5–3 μ.

Cylindrosporium smilacinae E. & E.

On *Smilacina amplexifolia* Nutt. Near Lake Coeur d'Alene, Idaho, Aug. 1898 (Prof. L. F. Henderson, no. 4688).

Spots dirty-brown, irregular and indefinite, 2–10 mm. diameter, partly limited by the veinlets, soon confluent over the greater part of the leaf, which turns yellow around them, acervuli amphigenous, tuberculiform-erumpent, black outside, amber-color or flesh-color within: conidia cylindrical or clavate-cylindrical, guttulate, more or less curved, mostly narrowed at one end, hyaline, 50–70 × 3.5–4.5 μ.

The black, erumpent acervuli have the appearance of a *Phyllachora*.

Pestalozzia crataegi E. & E.

On leaves of *Crataegus parvifolia*, Lake City, Florida, Nov. 1899 (H. H. Hume).

Acervuli black, erumpent, convex, 150 μ in diameter, mostly concentrically arranged on large (0.5–1.5 cm.) brown spots, mostly on the upper side of the leaf, but occasionally hypophyllous: conidia oblong-cylindrical, 5-septate, scarcely constricted, the four inner cells brown, terminal cells small, hyaline, 20–23 × 7–8 μ, apical cells with a short (4–5 μ), single oblique bristle, pedicel slender, hyaline, 12–15 μ.

Diplocladium cylindrosporum E. & E.

On dead leaves of *Asimina triloba*, Nuttallburg, West Va., July 31, 1899 (L. W. Nuttall).

Fertile hyphae fasciculate, hyaline, erect, 1–2-septate, 50–110 × 5–6 μ, subdichotomously branched above, the terminal branchlets short and slightly curved, bearing at their tips the cylindrical hyaline, erect, obtuse, uniseptate conidia 40–50 × 4–5 μ.

The short terminal branches resemble birds' claws. With the fertile hyphae are a few much longer, simple straight ones swollen at the tip.

Hadotrichum lupini E. & E.

On leaves of *Lupinus humilis*, Wyoming (Nelson), on *L. albifrons*, California (McClatchie), on *Lupinus* sp., Colorado (C. F. Baker).

Fertile hyphae clavate-cylindrical, continuous, olivaceous, 20–25×4 μ, densely fasciculate: conidia globose, subolivaceous, smooth, with a rather thick epispore, 10–12 μ in diameter.

In company with *Phyllosticta ferax* E. & E. (Proc. Phil. Acad. 1894: 355).

Mostly in the center of brownish dead spots surrounded by a broad belt of perithecia of the *Phyllosticta* of which it seems to be the conidial stage.

Pilacre pallida E. & E.

On rotten wood, Chattanooga, Colorado, June 19, 1899 (E. Bethel, no. 489).

Gregarious. Stipe stout, 1.5–2 mm. high, .75 mm. thick, equal or slightly contracted below, surrounded at base by white, straight, radiating threads which are closely appressed to the matrix, surface of stipe slightly roughened, dirty-flesh-color: head depressed, subdiscoid, subumbilicate beneath, 1–1.5 mm. across, covered with a thin umber colored membrane which soon disappears, exposing the dirty white, coarsely reticulate capillitium, the fertile threads of which are roughened by minute projecting points bearing the elliptical 6–8 × 5–6 μ, nearly hyaline conidia.

The head finally falls off all but the base which remains as a white convex disk on the top of the stipe.

Exosporium pallidum E. & E.

On dead limbs of *Rhus Toxicodendron*, Morrison, Colorado, May, 1899 (Prof. E. Bethel, no. 475).

Sporodochia bursting through the epidermis, 3–4 or more together, stromatically connected at base or occasionally single, 0.5–0.75 mm. in diameter, mostly flattened above, grayish inside, densely clothed on the surface with the stout (20–30 × 5–7 μ) hyaline (becoming black)? simple sporophores bearing at their tips the oblong or oblong-elliptical, 2- (sometimes 3-) septate more or less constricted, yellow-brown conidia 25–50 × 14–18 μ.

Differs from *E. clavuligerum* Lk. in its continuous, hyaline sporophores.

Dasyscypha tuberculiformis E. & E.

On dead stems of *Aquilegia coerulea*, Red Mt., Colorado, June, 1899, 12,000 ft. alt. (Bethel, no. 490).

Gregarious, erumpent, tuberculiform, 0.5 mm. in diameter, subtremelloid when fresh, clothed with long, white, mostly appressed hairs, immarginate, with a small, round opening at the top, the orifice surrounded by reflexed, straight, white, continuous hairs: asci clavate-cylindrical, short-stipitate, 75 × 10 μ, with straight, linear paraphyses about as long as the asci: sporidia biseriate, oblong, hyaline, continuous, 10–12 × 2.5–3 μ.

The specimens were not well matured so that the form and size of the sporidia will have to be more accurately ascertained hereafter.

Pyrenopeziza Coloradensis E. & E.

On dead stems of *Potentilla*, Red Mountain, Colorado, June, 1899, alt. 12,000 ft. (Bethel, no. 492).

Ascomata scattered, superficial, black, with a narrow, slightly incurved margin, disk concave or plane, $\frac{1}{12}$–1 mm. across: asci clavate-oblong, 100–110 × 15 μ, with simple stout paraphyses: sporidia biseriate, elliptical, with two large nuclei, hyaline, 20 × 10 μ.

Haematomyxa ascoboloides E. & E.

On dead herbaceous stems, Takoma Park, Maryland, February 26, 1899 (C. L. Shear).

Erumpent-superficial, orbicular, carnose-tremellose, convex-discoid and wine-color when fresh, concave and nearly black when dry, 0.5–0.75 mm. in diameter with a slight, dark-colored margin. The surface of the disk when fresh is distinctly roughened by the projecting tips of the asci as in *Ascobolus*: asci clavate-cylindrical, 80–100 × 12–15 μ, yellowish in the mass, paraphyses filiform, branched above, sporidia uniseriate, oblong-elliptical, 3-septate and more or less constricted at the septa, rounded at the ends, some of them slightly curved, submuriform, yellowish-hyaline, 18–22 × 8–10 μ.

Also on weather-beaten oak post, Kansas (Bartholomew).

Puccinia annulata E. & E.

On *Epilobium* sp., Yellowstone National Park, July, 1899 (Prof. Aven Nelson, no. 5930).

III. Sori hypophyllous, minute, crowded in orbicular patches 1–4 mm. in diameter surrounded by a narrow pallid ring and cov-

ered more or less with fragments of the ruptured epidermis: teleutospores cuneate or clavate, 25–35 × 12–15 μ, distinctly constricted, smooth, pale-yellow, epispore much thickened at the apex (8–10 μ thick) and dark-brown, upper cell elliptical or subglobose, lower cell narrowed to the pedicel which is hyaline, attenuated below and about 20 μ long.

The sori are nearly black and occur also sparingly along the midrib on the upper side of the leaf.

Puccinia synthyridis E. & E.

On leaves of *Synthyris rubra* Kunth, Pullman, Wash., June, 1898 (Prof. C. V. Piper, no. 390).

III. Sori amphigenous, scattered, 0.5–1 mm. in diameter, covered at first, then erumpent and surrounded by the ruptured epidermis, cinnamon-brown, flattish and pulverulent: teleutospores elliptical, rounded at both ends, constricted in the middle, light brown, epispore smooth or nearly so, slightly thickened at the apex with a flattish, transparent papilla, 20–30 × 15–20 μ: pedicels very short.

Differs from *P. acrophila* Pk. in the absence of any decided spots and the rather smaller spores. Specimens were sent to Mr. Peck who is of the opinion that this is not his *P. acrophila*.

Puccinia circinans E. & E.

On *Pentstemon spectabilis*, Grand Cañon of the Colorado (Prof. J. W. Toumey).

Spots orbicular or irregular, rusty-brown, zonate, darker in the center, 0.5–1.5 cm. in diameter, teleutosori amphigenous, subhemispherical, about .5 mm. in diameter, subcircinately arranged on the spots: teleutospores obovate or elliptical, cinnamon-brown, 30–40 × 15–20 μ, constricted, rounded above, and sometimes below, epispore thickened at the apex and darker: pedicels hyaline, as long as or longer than the spores.

Differs from *P. pentstemonis*, Pk. in the large conspicuous spots and according to Prof. J. C. Arthur, is distinct from *P. Mexicana* Dietel and Holway.

Puccinia musenii E. & E.

On *Musenium tenuifolium*, "Freeze out Hills," Wyoming, July 10, 1898 (Elias Nelson, 4491).

III. Sori pustuliform, oblong, 1–5 mm. long by 1 mm. broad, loosely covered by the lead-colored epidermis which is tardily

ruptured: teleutospores elliptical, scarcely constricted at the septum, rounded at the ends, deep chestnut-brown, 22–30 × 15–20 μ epispore minutely muriculate-roughened, very slightly thickened at the apex: pedicels short, 10–15 μ long, deciduous.

Seems distinct from any of the other species on the Umbelliferae. Comes near *P. enormis* Fckl. from which it differs in its shorter, deeper colored spores without any apical papilla.

Puccinia cornigera E. & E.

On *Tetraneuris Torreyana*, "Freeze-out Hills," Wyoming, July 10, 1898 (Elias Nelson, no. 4852).

III. Sori minute (0.5 mm.) orbicular, crowded, deeply sunk in the leaf and covered by the epidermis, then suberumpent and open above, amphigenous, leaf more or less swollen: teleutospores oblong, broadly constricted in the middle, rather abruptly attenuated or rounded below, epispore thickened above, with a conical, horn-like, subhyaline projection (often oblique) at the apex, 8–12 μ long: pedicel nearly hyaline, 60–80 μ long.

HENDERSONIA DIPLODIOIDES E. & E. Bull. Torr. Club, **25**: 510. 1898

The specific name should be changed to *angustifolia*, as there is already a *Hendersonia diplodioides* E. & E., Bull. Wash. Coll. **1**: 6.

GLOEOSPORIUM ALBOFERRUGINEUM E. & E. Proc. Acad. Nat. Sci. Phil. 1898: 371

A reëxamination of specimens of this species shows only *Discosia maculicola* Ger., the sporules of which may have been mistaken for *Gloeosporium* spores, and if so the species must be abandoned.

USTILAGO SPOROBOLI E. & E. Bull. Torr. Club, **24**: 282. 1897

Ustilago funalis E. & E. *id.* **24**: 257. 1897

This is not distinct from *Ustilago hypodiles* (Schlecht.).

UROMYCES BICOLOR E. & E. Bull. Torr. Club, **24**: 282. 1897

Specimens of this species collected by Professor Aven Nelson in the Yellowstone National Park differ from the original specimen from "Death Valley," in having the teleutospore sori elongated 1–5 × 0.5–0.75 mm., finally naked but surrounded by the lead-colored,

ruptured epidermis. On some of the leaves, however, are found the small (0.5–1 mm.) punctiform sori mentioned in the original description. The uredospores are accompanied by paraphyses.

PUCCINIA SIMILIS E. & E., Bull. Torr. Club, **25**: 508. 1898

The measurements of the teleutospores of this species are incorrectly given. They should be 35–55 × 22–27 μ. The uredospores also vary from globose; 15–26 μ in diameter to ovate or elliptical, 20–30 × 16–22 μ and are coarsely echinulate, much more distinctly so than in *P. tanaceti* according to Prof. J. C. Arthur. This is identical with *P. conferta* D. & H., but the descriptions of these two species are very different. *P. similis* has the sori *scattered* and larger, and teleutospores rounded at both ends, not to speak of the presence of *Uredo* and *Aecidium* in the last mentioned species.

PUCCINIA GRINDELIAE Peck, Bot. Gaz. **4**: 127. 1879

Puccinia variolans Hark. Bull. Calif. Acad. Sci. Feb. 1884, and *Puccinia tuberculans* E. & E. Proc. Phil. Acad. 153. 1893, are synonyms of this species.

CYTISPORA ANNULARIS E. & E. Bull. Torr. Club, **24**: 288. 1897

Found also in Canada, by Mr. Macoun, on *Fraxinus sambucifolia*. When the epidermis is pulled off the perithecia come with it and when dry they are strongly compressed below so as to become cup-shaped.

ANTHOSTOMELLA MAMMOIDES E. & E. Proc. Acad. Nat. Sci. Phila. 139. 1893

A reëxamination of the original material shows that some of the larger pustules contain 2–4 perithecia.

The species then is ambiguous between *Anthostomella* and *Anthostoma*.

LOPHIOSTOMA PUSTULATUM E. & E. Bull. Torr. Club, **25**: 503. 1898, is not distinct from *Pseudovalsa viticola* E. & E. Proc. Acad. Nat. Sci. Phil. 343. 1894.

It is *Pseudovalsa* and not *Lophiostoma* for though some of the ostiola are slightly compressed, the perithecia are, as a rule, enclosed

in a hemispherical stroma two to four in a stroma. The examination of more abundant material recently sent by Mr. Bartholomew, makes this correction necessary.

RAMULARIA SIDALCEAE E. & E. Jour. Mycology 1: 1888

Specimens on *Sidalcea candida* collected by Mr. E. Bartholomew at Ohio City, Colorado, Sept., 1899, vary from the description cited in having the spots confluent over the greater part of the upper surface of the leaf and the tuft of hyphae also densely confluent below. The conidia also vary from globose, 10–15 μ in diam. to oblong or oblong-elliptical, 12–22 × 8–10 μ.

This is not typical *Ramularia*.

New Species of Fungi*

By Flora W. Patterson

Hendersonia oleae

Forming large marginal pallid patches, with brown border: perithecia black, membranous, immersed, amphigenous, globose, 100–150 μ: conidia light olivaceous, oblong-elliptical, with subacute ends, 3-septate, not constricted, straight or slightly curved, 10 × 3.5 μ.

On leaves of *Olea dioica*, Botanic Garden, Sydney, New South Wales, April, 1898, J. H. Maiden.

Leptothyrium nitidum

Not forming spots: perithecia superficial, densely gregarious, sometimes confluent, elliptical-dimidiate, black, shining, astomate, occasionally longitudinally striate, context radiately cellular: conidia cylindrical, straight or slightly curved, hyaline, 2.5–3 × 1 μ: sterigmata 6 × 2 μ, arising from a compact layer of hyaline, rectangular cells, which are filled with large guttulae.

On dry stems of *Heracleum lanatum*, Longpine, Nebraska, February 24, 1898, J. M. Bates, no. 769.

Gloeosporium cassiae

Spots alutaceous, irregular in outline, with a raised brown border: acervuli amphigenous, scattered throughout the spots, raising the epidermis in a pustuliform manner, then erumpent: conidia ovate, pointed at one end, straight or slightly inequilateral, 4–6 × 1.5–2 μ: basidia hyaline, continuous, 15 × 1.5 μ.

On living leaves of *Cinnamomum cassia*, greenhouse, U. S. Department of Agriculture, January, 1900, F. W. P.

Gloeosporium clausenae

Spots large, irregular, subochraceous, with wavy, darker border on the margin of the leaves, most especially involving the tips: acervuli generally epiphyllous, very numerous, at first covered by the epidermis, subochraceous, erumpent: conidia ovate-oblong,

* Type specimens of these species are in the herbarium of the Division of Vegetable Physiology and Pathology, U. S. Department of Agriculture.

often inequilateral: ends obtuse or rounded, 15–17 × 5–6 μ: basidia filiform, hyaline, shorter than the conidia.

On living leaves of *Clausena wampi*, greenhouse, Department of Agriculture, January, 1900, F. W. P.

Gloeosporium ochraceum

Causing large arid spots of irregular shape, especially upon the ends of the leaves, alutaceous, with a dark brown border: acervuli amphigenous, raising the epidermis in dark pustules becoming erumpent: conidia ochraceous in the mass, ovate, somewhat pointed at one end, guttulate, 12–15 × 4–5 μ: basidia hyaline, 9–12 × 3 μ.

On living leaves of *Cinnamomum aromaticum*, greenhouse, Department of Agriculture, January, 1900, F. W. P.

It will be observed that while the general appearance produced by the presence of *Gloeosporium ochraceum* on *Cinnamomum aromaticum* is very similar to that of *Gloeosporium cassiae* on *Cinnamomum cassia*, they differ widely in microscopic details.

Gloeosporium oleae

Spots white, arid, with an inconspicuous brown border, large, sometimes occupying about one-fifth of the leaf's surface: acervuli epiphyllous, numerous, long, covered by the epidermis, erumpent, dark, almost black: conidia oblong or ovate-oblong, sometimes slightly inequilateral, often bi-guttulate, 9–15 × 4–5 μ.

On living leaves of *Olea fragrans*, greenhouse, Department of Agriculture, January, 1900, F. W. P.

Colletotrichum setosum

Spots large, irregular, arid, yellowish-white, with purple border: acervuli amphigenous, not erumpent, numerous, minute, 25–45 μ diameter: setae very dark brown, septate, slightly flexuous, obtuse, with somewhat enlarged base, 30–45 × 4 μ: conidia oblong, with rounded ends, 15–17 × 4–5 μ.

On *Tillandsia* sp., greenhouse, U. S. Department of Agriculture, received 1899 from Costa Rica, C. Werckle.

Libertella olivacea

Acervuli densely gregarious, subcutaneous, at length erumpent, sub-conical, .5–1 mm. diameter, olivaceous: conidia hyaline, filiform, curved, 5–6 × 1 μ: basidia filiform, 10–12 × 1 μ.

On dead branches of *Rhus glabra*, Ainsworth, Nebr., May 14, 1898, J. M. Bates, no. 814.

Aspergillus umbrinus

Sterile hyphae creeping, branched, septate, hyaline, fertile hyphae erect, simple, septate, hyaline or slightly colored, 150–300 × 6–8 μ, apex inflated, sub-globose, 15–24 μ, generally 18 μ: sterigmata club-shaped, 12 × 6 μ: conidia in chains, bright umber colored, verrucose, 6–9 μ diameter.

The description is for the typical form from which there are extreme variations. Fertile hyphae may be only 18 μ in length, having an apex but slightly and irregularly enlarged, which may bear but 3–6 sterigmata, which are sometimes flask-shaped, 9–18 × 6–8 μ, and occasionally septate. When cultivated upon sterilized potato the species grows with great luxuriance. Measurements of conidia and hyphae remain practically the same, but the vesiculose portion is more nearly spherical and ranges from 30–45 μ in diameter, with sterigmata averaging 15 μ.

Upon such cultures in about five weeks there have developed numerous snow-white sclerotia, 1–5 mm. in height and 1–3 mm. in breadth.

In Brazil nut, Washington, D. C., February, 1900, E. A. Bessey.

Sterigmatocystis castanea

Thinly effused: fertile hyphae erect, simple, continuous, hyaline, 400–550 × 12 μ: apex inflated to a spherical head, 30–40 μ, from which radiate clavulate basidia 16 μ in length: sterigmata 4, 6–7 × 2 μ: conidia in chains of 4 or 5, spherical, verrucose, brown, 4–5 μ.

On *Persoonia lanceolata*, New South Wales, March, 1898, J. H. Maiden.

Cladosporium aeruginosum

Tufts epiphyllous, verdigris green, densely fasciculate, distinct, upon light-colored arid spots: hyphae simple, septate, nodulose, very light green, 45–90 × 3–3.5 μ: conidia lateral and terminal, in chains of 5 or more, almost hyaline, generally oblong and continuous, sometimes oblong-elliptical and once or twice septate, 5–12 × 2–2.5 μ.

On living leaves of *Olea fragrans* affected by *Gloeosporium oleae*, greenhouse, Department of Agriculture, January, 1900, F. W. P.

Cladosporium fici

Not forming spots: tufts conspicuous, aggregated, sometimes confluent, olive green: hyphae long, erect, slightly wavy, very rarely branched, septate, 45–250 × 4 μ: conidia light olive, terminal and lateral, more especially borne near the tips of the hyphae, oblong continuous ones 6–9 × 4 μ, sometimes in chains of 4, those 1–3 septate, oblong-elliptical to cylindrical, 9–25 × 4–5 μ, somewhat thickened at the septa and the longer ones often equilateral.

On living leaves of *Ficus parcelli*, greenhouse, Department of Agriculture, January, 1900, F. W. P.

Helminthosporium solitarium

Sterile hyphae inconspicuous, generally subepidermal: fertile hyphae, but slightly fasciculate, often solitary, erect, dark sooty brown, septate, swollen at the base, the upper portion (about ⅓, upon which the spores are borne) wavy or twisted, usually lighter colored at the apex, 60–150 × 6 μ; conidia dark brown, at first 2–4-guttulate, then 3–5-septate, oblong-elliptical, sometimes slightly curved, 24–30 × 8–9 μ.

On leaves of *Iris* sp. affected with *Fusarium iridis* Oud., Minneapolis, Minn., October, 1898, J. M. Bates, no. 928.

Heterosporium oxybaphi

Sterile hyphae subcuticular: fertile hyphae erect, densely fasciculate, fuscous olivaceous, simple, septate, coarsely nodulose, 90–125 × 6–7 μ: conidia in short chains soon falling apart, fuscous-olivaceous, epispore echinulate, elliptical or ovoid, 1–2- rarely 3-septate, seldom constricted at the septa, 18–27 × 9–12 μ.

On dead stems of *Oxybaphus angustifolius*, Longpine, Nebraska, June 24, 1898, J. M. Bates, no. 821.

Stemphylium butyri

Hyphae decumbent, long, wavy, grayish black, closely septate, 3–4 μ in diameter: fertile branches often very short: conidia darker than hyphae, verrucose, constricted at the septa, very irregular in shape, sometimes almost spherical, generally elliptical or sub-pyriform, borne at the tip or sides of the branches, sometimes two or three connate and in clusters, 18–36 × 9–18 μ.

Butter affected with this fungus assumes a bluish-black color in isolated spots, and these gradually extend over the entire surface. The specific description is written from an examination of butter sent to the Division of Vegetable Physiology and Pathology

from the Agricultural Experiment Station of Oregon, by D. W. Trine, and from cultures of the same made upon agar-agar. Mr. A. F. Woods reports having seen the same species, which he recognized as a new one, in butter from South Carolina and other localities.

Stemphylium elasticae

Effused, grayish-black, decumbent, intricately branched, closely septate, 3–3.5 μ in diameter: conidia borne in chains of 2–6 at or near the tips of the fertile branches, not soon falling apart: verrucose, muriformly many-septate, constricted at the septa, darker than the hyphae, irregular in shape, ovate and somewhat pyriform or cylindrical, 18–45 × 9–18 μ, isthmus cell almost hyaline, 2–3 μ.

On parts of leaves of *Ficus elastica* attacked by *Gloeosporium elasticae* Cke. and Mass., Washington, D. C., January, 1900, F. W. P.

Volutella allii

Sporodochia black, sessile, convex, elongated, 100–150 μ in diameter, gregarious and sometimes confluent, densely covered with rigid black setae that are smooth with pointed tips and are 60–175 × 6 μ; conidia fusiform-falcate, hyaline, 18–21 × 3–4 μ; conidiophores densely crowded, unbranched, hyaline or slightly olive tinged, 18–20 × 3 μ.

On scapes of *Allium Nuttallii*, Atkinson, Neb., June 22, 1898, J. M. Bates, no. 820.

DIVISION VEGETABLE PHYSIOLOGY AND PATHOLOGY,
U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C.

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BULLETIN

OF THE

TORREY BOTANICAL CLUB

NOVEMBER 1900

New Species of Fungi from various Localities

BY J. B. ELLIS & B. M. EVERHART

Asterina agaves E. & E.

On *Agave atrovirens*, Apam, Mexico, April, 1900 (Professor Wm. Trelease, no. 194).

Perithecia in suborbicular groups .5–1 cm. across, superficial, subglobose, 80–100 μ in diameter, astomous: asci obovate, 50–60 × 20 μ: sporidia crowded-biseriate, clavate oblong, uniseptate near the broader end, constricted at the septum, ends obtuse, 15–27 × 6–8 μ.

Between and around the perithecia the leaf is thinly clothed with short, brown, subfasciculate hairs.

Dothidella heucherae E. & E.

On living leaves of *Heuchera cylindrica*, Waitesburg, Wash., Mar. 11, 1900 (R. M. Horner, no. 1418).

Forming a thin, suborbicular, black crust on the upper surface of the leaf, .5–1 cm. diameter and becoming more or less distinctly bullate and surrounded by a narrow, reddish-purple zone: ascigerous cells (perithecia) globose, small, 80–100 μ, numerous, monostichous, buried in the stroma the surface of which is roughened by the erumpent ostiola: asci sessile, oblong-cylindrical, 22–35 × 8–10 μ: sporidia biseriate, oblong, hyaline, 3–4-nucleate, then uniseptate in the middle but scarcely constricted, 15–20 × 3–3.5 μ.

Phyllosticta heucherae E. & E., Am. Nat. **31**: 428. 1897, is the spermogonial stage of this.

Urocystis gei E. & E.

On leaves of *Geum ciliatum* Pursh, Waitesburg, Wash., May 7, 1900 (Robert M. Horner, no. 1430).

Sori epiphyllous, bullate, elongated, .5–1 cm. long, opening along the middle as in *U. anemones*, formed by the inflated epidermis; central spores paler, subglobose, 12–16 μ diam.; peripherical spores darker, slightly granular-roughened, globose, 10 μ diam., or ovate, 10 × 6–7 μ.

Puccinia bicolor E. & E.

On leaves of *Hieracium Scouleri* Hook., Waitesburg, Wash., May 7, 1900 (Robert M. Horner, no. 1433).

Mostly hypophyllous but also amphigenous. Teleutospore sori small (.25–.5 mm.), subcuticular straw-yellow, flat and scale-like at first, gregarious and subconfluent on pallid, subindefinite, orbicular, subconfluent spots 3–5 mm. diam. The central sori soon become black and thickened and burst the cuticle which, however, still partly envelops them. Teleutospores clavate- or obovate-oblong, smooth, upper cell subglobose, the epispore strongly thickened above, often subtruncate and almost opake, lower cell mostly narrowed to the stout pedicel which is of about the same length as the spore, which is distinctly constricted.

Very different from *P. hieracii*.

Phyllosticta similispora Ell. & Davis.

On *Solidago rigida*, Racine, Wis., Sept., 1898 (Davis, no. 984).

Epiphyllous, spots small, scattered, black, convex, 1–2 mm. diam., sometimes confluent, without any definite border resembling small black swellings on the leaf; perithecia prominent, black, 100–150 μ diam., 1–6 on a spot; sporules almost exactly like those of *P. sphaeropsispora* E. & E. on *Solidago confinis* from California, obovate-elliptical, shaped much like apple seeds, some of them globose (perhaps because seen endwise).

The California species is on large, 1 cm., thin, white spots with a narrow but distinct margin.

Phyllosticta smilacis E. &. E.

On leaves of *Smilax*, Oldtown, Me. (Prof. F. L. Harvey). Common also around Newfield, N. J., and sent from various other sections.

Spots brick-color, round, .5–1 cm. diam. with a sharply defined border, often paler in the center; sporules oblong-elliptical or broad-fusoid, 15–20 × 7–9 μ.

This has been observed on various smooth-leaved species of *Smilax*, for twenty years or more, but it does not appear to have been described. Specimens occur with uniseptate spores (*Ascochyta*) but usually there is no septum.

Phoma zeicola E. & E.

On dead leaves of *Zea Mays*, Tuskegee, Ala., July, 1897 (Geo. W. Carver, no. 259).

Perithecia innate, thickly but evenly scattered, visible on both sides of the leaf, 80–100 μ diam.; sporules fusoid-oblong or oblong-elliptical, 4.5–5.5 × 1.5 μ.

Phoma orthosticha E. & E.

On leaves of *Typha latifolia*, Orono, Maine, October, 1899 (P. L. Ricker).

Perithecia subcuticular, minute (40–50 μ), arranged in narrow strips 3–6 mm. long between the nerves of the leaf; sporules oblong-elliptical, minute, 2.5–3 × .75–1 μ.

Comes near *P. gyneriicola* Cke., but that has the perithecia scattered or gregarious. Differs from *P. typharum* Sacc. and *P. serialis* Pat. in the size and shape of the sporules.

Sphaeropsis nubilosa E. & B.

On bark of exposed root of *Fraxinus viridis*, Rooks Co., Kansas, (Bartholomew, no. 2772).

Gregarious, superficial, forming a round, black patch 1 cm. or more across. Perithecia globose or slightly depressed-globose, with the base only slightly sunk in the bark, 300–400 μ diam. with a papilliform ostiolum; sporules oblong-elliptical 15–20 × 7–8 μ.

Differs from *S. biformis* Pk. and *S. Pennsylvanica* B. & C. in its superficial growth. This can not be confounded with *Diplodia rhizogena* E. & B. which has the same habitat.

Hendersonia kalmicola E. & B.

On dead twigs of *Kalmia latifolia* killed by fire a year ago. Newfield, N. J., May 20, 1900.

Perithecia 2–3 lying side by side in the blackened substance of the bark which is split longitudinally and slightly raised, the papilliform ostiola being visible in the narrow chinks; sporules elliptical or slightly obovate, 3-septate, pale brown, 12–15 × 6–8 μ, on slender pedicels about 15 μ long.

SEPTORIA MEGASPORA Speg.? Fung. Arg. Pug. 1, 188

Kellermannia mutica E. & E. in herb.

On leaves of *Yucca filifera*, Monterey, Mexico, March, 1900, and on leaves of *Agave Lechngrulle*, Peyotes, Mexico, April, 1900 (Dr. Wm. Trelease).

Perithecia scattered, sunk in the substance of the leaf, .5–1 mm. diam., raising and throwing off a circular piece off the cuticle directly over them: sporules clavate-cylindrical, hyaline, multiseptate, scarcely constricted, 70–100 × 8–10 μ, attenuated above to an obtuse point, sessile, fasciculate.

Differs from Spegazini's description in the multiseptate spores and might properly be placed in the genus *Phleospora*.

Septoria annua E. & E.

On partly dead leaves and culms of *Poa annua*, London, Canada, May, 1900 (J. Dearness).

Perithecia scattered, black, depressed-globose, pierced above, 75–110 μ diam.; sporules abundant, filiform, mostly attenuated below, nucleolate, hyaline, 30–40 × 1.5 μ, slightly curved. Comes very near *S. tenella* C. & E.

Septoria cylindrica E. & E.

On *Anemone cylindrica*, Bozeman, Montana, July, 1878 (J. W. Blankenship, no. 78).

Perithecia hypophyllous, globose, 100–110 μ diam., black, erumpent, scattered on pallid, indefinite spots; sporules fusoid-cylindrical, moderately curved, 25–35 × 2.5–3 μ, 3-(pseudo-)septate, nucleate at first.

Melanconium angustum E. & E.

On dead hickory limb, Newfield, N. J., Feb., 1900.

Acervuli minute, raising the epidermis into small pustules, then erumpent, often compressed; conidia oblong, olive-brown, 2–3-nucleate, straight or nearly so, 12–16 × 4–5.5 μ, narrower and darker than in *M. pallidum* Pk., and acervuli smaller.

Melanconiopsis E. & E., gen. nov.

This is *Melanconium* with the cellular stroma of *Cytispora*, and with the spores of *Melanconium*. Doubtless the stylosporous stage of *Melanconis* or *Massariovalsa*.

Melanconiopsis inquinans E. & E.

On dead limbs of *Acer dasycarpum*, Louisville, Kansas, May, 1900 (Bartholomew, no. 2519).

Stroma sunken in the bark, which is raised into pustules and blackened by the ejected spores; cells 6–10, globose, circinate, about .5 mm. diam., finally confluent, their slender necks convergent and united above in a single papilliform or short-cylindrical, erumpent ostiolum; sporules oblong-elliptical, brown, 20–30 × 12–15 μ on short basidia.

Cylindrosporium ariaefolium E. & E.

On leaves of *Spiraea ariaefolia* Wats., Latah Co., Idaho, July, 1899 (R. M. Horner, no. 1216).

Spots small, 1–2 mm., deep-brown, purplish-brown at first with the margin lighter, numerous, of irregular shape; acervuli epiphyllous, rather large and flat, brown; conidia lunate, nucleate becoming 3-septate above, 30–45 × 3.5–4 μ.

Differs from *C. spiraeicolum* E. & E. in the different color of the spots, curved and rather broader spores attenuated towards each end.

In the description of *C. spiracicolum* the conidia are erroneously stated as 3.5–5 μ thick, whereas they are mostly only 3–3.5 μ.

Cylindrosporium smilacis E. & E.

On *Smilax* sp., Tuskegee, Ala., July, 1897 (Geo. W. Carver).

Spots ferruginous-brown, 4–5 mm. diam., orbicular or partly limited by the veinlets of the leaf, sometimes with a narrow, darker colored border; acervuli epiphyllous, covered by the cuticle, 80–110 μ diam., conidia discharged in little white heaps, curved, 3-septate, hyaline, 20–30 × 2.5 μ.

Pestalozzia bicolor E. & E.

On dead leaves of *Salix* sp., Tuskegee, Ala., Dec., 1897 (G. W. Carver, no. 387).

Acervuli amphigenous, subcuticular, scattered and here and there subcespitose, small, raising the cuticle into little yellowish-

white pustules which become darker. Conidia fusoid-oblong, 4-septate, three inner cells brown, terminal cells conical and hyaline, the colored part 13–15 × 5–7 μ, or including the terminal cells 20–22 μ long; crest of 3–5 spreading, hyaline bristles 13–15 μ long.

The light colored acervuli are all that distinguish this from *P. guepini* Desm.

PESTALOZZIA COCOLOBAE E. & E. Botan. Series Field Columbian Museum, **1**:

Specimens of this species sent from southern Florida by H. H. Hume on the same host as the Yucatan specimen (*Cocoloba uvifera*) have spores only 3.5–4 μ wide or exceptionally 5 μ, making it altogether probable that *P. cocolobae* is only a form of *P. guepini* Desm.

SEPTORIA FULVESCENS Ell. & Halst. Bull. Torr. Club, **27**: 57. 1900

This name should be **S. flavescens.** There is already a *Septoria fulvescens* Sacc. on *Lathyrus*. See Sacc. Syll. Fung. **3**: 110.

Ramularia brevipes E. & E.

On leaves of *Monarda Clinopodia?* Tuskegee, Ala., May, 1897 (Geo. W. Carver, no. 224).

Hypophyllous. Appearing at first as pale indefinite spots which soon become confluent over the greater part of the leaf and gray from the abundant conidia, and the leaf finally becomes brown and dead: conidia filiform, nucleolate, hyaline, mostly curved, 30–60 × 2–2.5, arising from short, fasciculate, elliptical or short cylindrical, 8–12 × 3–4 μ, basidia being hardly more than elongated cells of the proligerous layer.

No indications of any *Entyloma* were observed in connection with this.

RAMULARIA AGOSERIDIS E. & E., in Ell. & Evrht. N. A. F. 3079

On *Agoseris pulchella*, Berkeley, Calif. (Blasdale) and on *Troximon grandiflorum*, Waitesburg, Wash., May, 1900 (Robert M. Horner, no. 1437.

Spots definite, often terminal or marginal, dirty brown, .5–1 cm. diameter, hyphae amphigenous, in compact, punctiform tufts, simple,

mostly straight, continuous, often attenuated above and subdentate, 20–25 × 4 μ, hyaline, conidia oblong or cylindrical, hyaline, nucleate, obtuse, 12–22 × 5–6 μ.

This was issued in N. A. F. but as far as we can find has not heretofore been described.

Ramularia sphaerioides E. & E.

On living leaves of *Thermopsis montana* Gray, Waitesburg, Wash., May, 1900 (Robert M. Horner, no. 1458).

Hypophyllous, on small (1–2 mm.) irregular pallid spots which finally become more definite and rusty-brown above; hyphae densely fasciculate in small sphaeroid tufts 75–80 μ diameter of a slaty-gray color, the single hyphae 20–30 × 2–2.5 μ, septulate and smoky hyaline, subdentate above, conidia ovate-elliptical, uniseptate, slightly roughened, filled with small nuclei, 12–22 × 7–10 μ.

Differs from typical *Ramularia*.

Cercospora phyllitidis Hume

On *Polypodium Phyllitidis* L., Hobe Sound, east coast of Florida, March 14, 1900 (H. H. Hume).

Spots brown, of irregular outline, 1–2 cm. diameter: fertile hyphae, brown, sparingly septate, undulate, 60–80 × 3.5–4 μ, in dense, spreading tufts thickly scattered over the spots on both sides of the leaf but more abundant below, conidia lanceolate, 3–5-septate, hyaline, 40–80 × 3–3.5 μ.

Cercospora smilacinae E. & E.

On leaves of *Smilacina sessilifolia* Nutt., Latah Co., Idaho, July, 1899 (Robert M. Horner, no. 1293).

Spots amphigenous, oblong-elliptical, 2–4 × 1–2 mm., grayish-white, bounded by a red line; fertile hyphae mostly epiphyllous, very short, 10–12 × 3 μ, crowded in dense tufts 35–50 μ diameter which are soon obscured by a subcrustaceous, black mycelium occupying the center of the spots. The tufts of hyphae also appear on dead areas of the leaf outside the spots, arranged in a seriate manner between the nerves of the leaf: conidia filiform, subundulate or slightly curved, 40–60 × 2.5 μ, greenish or yellowish-hyaline, with a single pseudoseptum near the middle, exceptionally 2–3 pseudoseptate. The fertile hyphae are hyaline with a brownish tint below.

Cercosporella colubrina E. & E.

On leaves of *Solidago salsuginosus*, Columbia Co., Washington, July, 1897 (R. M. Horner, no. 1354).

Amphigenous, on round or subelongated, definite white spots 1–2 mm. diameter thickly scattered over the leaves, reminding one of the skin of a spotted snake or lizard: hyphae in minute closely crowded tufts in the center of the spots, cespitose, hyaline, delicate, 22–25 × 1.5 μ, entire or slightly toothed above, continuous: conidia filiform, straight or slightly curved, 30–40 × 1–1.25 μ, hyaline, straight or slightly curved, faintly nucleolate.

Distinct from *C. nivea* E. & B., or *C. nivosa* E. & E. in its distinct white spots and less robust habit. *C. cana* Sacc. is also different.